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## VOCATIONAL TRAINING IN LARGE CITIES <sup>1</sup>

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There are several statements in the paper we have just heard, which make such a sharp distinction between the conception of vocational training and the conception of general training, that I am taking the opportunity to discuss those points very briefly before entering on what I have to say upon this subject, as viewed from the standpoint of one who is dealing with actual conditions in a large city. I feel very grateful to Professor Person for the clear way in which he has presented the subject. There is so much vagueness, so much befogging of the issue, as regards vocational training, that it is a great satisfaction, a wonderful help in thinking, to have the matter brought before us in this fashion.

Professor Person speaks of the atmosphere of the general school as being that of perfunctory performance of duty. A school of which that is true is not entitled to the name of a school, because there must be back of all the work of any school that is worthy of the name a certain amount of interest and enthusiasm. If it is true, that the vocational school is to stand for enthusiastic endeavor and the general school is for the doing of tasks because they have to be done, we face a most sweeping indictment against the existing American system of education. Another statement is that the vocational school stands by itself in this ideal scheme and the general school by itself, with no connection, no action and reaction, between the two. This would seem to be an impossibility. You send a current of electricity through one wire, and the wire that lies alongside, even though there be no connection, is affected by the process we call induction, and in our American system of education, closely related as the different parts must be, you cannot develop along a certain line without the other parts of the system feeling the effects. My own judgment is, that as vocational training comes to be, it will affect most powerfully and most helpfully the general training, because vocational training by reason of its specific nature must define

<sup>1</sup> Read at the annual meeting of the New England Association of Colleges and Preparatory Schools, October, 1908.

its purpose clearly, and there will be an urgency upon all schools to define their aims clearly. The system we have heard outlined is in many respects like that which has been built up in Germany, and the results of the German system certainly testify to its value and efficiency. There might be an interrogation at this point as to whether, with the different social, economic, and political conditions of this country, a scheme of the kind can be worked out exactly according to the ideal plan as presented.

One other question, relating to the domain of psychology, into which I will not enter, is as to the use of the terms "special capacity" and "general capacity." You can have specific skill, special skill. Whether there is such a thing as special capacity is a question that I would like to have considered by those who are versed in psychological study.

Now as regards the use of English, it is said that the graduate of the high school goes out unable to write a good business letter. Is it necessary to wait until we have vocational schools to secure results in the training in English? It certainly should be possible for one who is trained in the English work of a grammar school to know how to put into correct form a letter, and in the high school the ability should be given to arrange ideas coherently and in such order that the letter would pass muster before the critical eye of a business man. The business man, to be sure, judges by a different standard from the school man, and sometimes his judgment is hasty and he is caught in his own net. An illustration came to my attention a year or two ago in the city of Springfield, where a merchant was taking the schools to task because the young men and women who came in to work in his store during the holiday season were not adept in accounts. He said, "No one of those boys or girls can add up a series of figures correctly." The gentleman to whom he was speaking said, "You cannot do that yourself, my dear sir." The man was thrown off his guard and a little bit out of temper. He said, "Try me and see." His friend gave him a comparatively simple sum, and in the second column the business man made a mistake. He did not have the power of adaptation to meet a somewhat novel situation.

The question of expense, which the paper discussed in such a delightfully optimistic way, is one unfortunately that we must face in a very hard, practical fashion. Resources are not unlimited. And this is one reason why we need, in Massachusetts at least, I don't

know how it may be in New Hampshire, all the wisdom and public spirit that we can bring to bear upon this question. There is great danger of a chaotic, unsatisfactory condition of things resulting from rash experimentation. Towns are limited in their means, some of them hard put to meet the expenses they are under at present. High schools are finding it difficult to carry out their present programmes. We cannot have too much of administrative skill, business foresight, and knowledge of the whole situation and the factors involved in order to work out this problem, to conserve what there is in the present system, to improve it as the need shall be, to introduce vocational training for boys and girls, for young men and women, and at the same time keep our general instruction strong, sane, and sound. I do not know of a more urgent, more difficult, and more important problem that has faced the educational authorities of the state.

In Springfield, to come more directly to the topic of which I am to speak, the head masters of both grammar and high schools some months ago made a careful study of the conditions as regards vocational training or industrial training in that city. It was a study of the pupil and his needs, the proper function of the schoolmaster. We found that in the elementary schools there were 801 pupils of the age of 14, 417 of the age of 15, 104 of the age of 16, 34 of the age of 17, 7 of the age of 18—the ages are averages—a total of 1,423 pupils 14 years or over. These data showed that pupils were staying too long in the elementary schools, and for some reason or other were not advancing as rapidly as they should. It was also found that the school population of 14 to 16 could be classified as follows: In a total of 2,641, 15 per cent., or 427, were in the high school; 1,218, or 47 per cent., in the elementary; 268, or 10 per cent., in the parochial and private, and 727, or 28 per cent., not in any school. Over 700 boys and girls at that important time of life were losing the benefit of discipline and training, and were drifting into the world with no special skill for any vocation.

It further appeared from our study that the high schools do not reach a large element of the youth of the city. An examination of the school returns for the last five years shows that out of a given group of children entering the elementary course only one-third of the number made the high school; in other words, 70 per cent. finished their schooling in the ninth grade or lower. Certainly the state is not ministering to the real needs of a very large element of its

youth. You will also recall the figures made up by the state industrial commission, in which they estimate that there are 25,000 children in the state who are thus turned out to shift for themselves, without any special aptitude, and without any special interest. They recruit the drifting element in our population, the "floaters" of our industrial society, as dangerous an element as the "floaters" of the political world. If you study the boys and girls who thus go out you will see that the meaning of life has not come home to them. They have no large interests. They secure employment somewhere by chance. The job is usually not one to which the boy or the girl is adapted. The youth finds he is not a success. He goes somewhere else, and so for two or three years shifts from one position to another, with small returns in the shape of wages, with little satisfaction, and finally settles down in some shop or store and becomes a wage-earner, doing the most perfunctory kind of work. Such an experience does not contribute to the best returns in life, and the best efficiency in service.

I was interested in connection with this topic, to look up the statistics of children under sixteen who were employed in different establishments. These figures are in *Bulletin 53, Census of Manufactures, Census of 1905 for Massachusetts*, under the auspices of the Department of Commerce and Labor, Bureau of the Census, S. N. D. North, Director. It is issued from the Government Printing Office in Washington. The census was taken three years ago, and the figures cannot have changed very much since then. According to this report children under sixteen employed in the state numbered 14,000—the round numbers—with wages of something over \$3,000,000, an average of about \$230 a year, or 70 cents a day. An interesting comparison is that between urban communities and rural places in respect to child employment, for it is fair to say that one under 16 is a child in all matters of development. Out of these 14,000, 12,000 approximately were in urban communities and 2,000 in country towns. In 1900 there were approximately 10,000 child workers in cities, an increase of 24 per cent. In rural communities there were 2,408 in 1905, and 2,406 in 1900, practically no increase. The tendency is for child labor to increase in the great cities, as we might assume, a priori, to be the case. Wages for child labor in the rural community, on the basis of the figures handed in, seem to be somewhat larger than in the case of the city. In 1905, the average yearly wage was \$250, a decided increase since 1900.

These figures are by no means complete. You can understand that in view of the present laws regarding the employment of child labor, manufacturers in many cases will evade giving returns, and it is entirely possible that the number of children under sixteen employed in our various industries is larger than the census shows. In Springfield 300 children are reported. The number must be greater. Boston returns only 867, Brockton 103, Fall River 1,241. You will notice that the large manufacturing places have more children of sixteen and under employed than in the case of the residence communities. This we might assume to be the case at the outset, without the figures before us. Gloucester, for example, reports 25 children, Holyoke 1,067, Lawrence 1,172, Lowell 1,512, New Bedford 954, Somerville 41, Worcester 616.

So the question comes, what is the state going to do with this great floating population of youth? How are these children to be kept longer in school? How are they to be fitted so as to play their parts in life more efficiently, with greater satisfaction to themselves, with greater surety and safety to the community? The suggestion was made in Springfield, that the boys, and to some extent, the girls, who leave school early are repelled because the courses deal largely with book subjects, and are presented in strictly academic fashion. The boys in many cases had interests along mechanical lines; and an opportunity to do something in a directly practical way as regards an industry would appeal to many of those for whom the existing courses had no particular interest. It was urged that in the upper grades of the grammar schools, taking advantage of the shops there existing, because Springfield is well provided in that direction, there should be established industrial classes for both boys and girls, and that the grammar masters select from pupils such boys and girls as showed aptitude in practical lines and who did not have interest in existing courses, and transfer these pupils to this industrial course. This course was to contain the simple elements of arithmetic, English, science, and other subjects of the grammar schools, to be taught in a direct, practical fashion, and, in addition, a large amount of industrial work on the side of domestic science for the girls, and manual training, shopwork, and drawing for the boys, with the possible introduction of the rudiments of certain trades. Means are not available at present for carrying out such a project but the grammar masters, without exception, were in favor of the plan as an aid in keeping children longer in school and leading them up to a distinct-

ively vocational training. We have not yet reached the point where we can see how vocational training itself can be brought into our schools.

The above plan deals with elementary grades only. As for the high school, a master who knows his pupils understands that many fall out and drift into life, just as the young boys and girls do, without any specific aim. There should be correlated with the high school, courses into which pupils of this kind could be inducted. I do not agree with the previous speaker in leaving the choice entirely to the pupil. When I was in England in 1905, I heard of a unique society, undertaken as a commercial enterprise. It is called the Future Careers Company, and its business is to instruct parents—not perhaps instruct, that is a little too strong a word, but to advise parents as to the capacities of their children, so that mistakes might not be made in the taking-up of a life-work. Every teacher who is wide-awake to his pupils' capacity can help them in making the choices that determine success or failure. There are certain broad generalities, at least, that may be followed, even if we do not go into particularities. And so I conceive of no more important duty falling upon the teacher in the high school, when we have this system of vocational training established, than picking out this boy, that boy, and putting him in the way of life most likely to lead to success. It is important for the boy, it is fully as important for the community and for the state. Many instances are in mind where such pupils could have been brought into a much more effective relation to life, and to live with more satisfaction to themselves, if such practical schooling were provided. So there must be a close correlation between the existing system of instruction and that which shall be established under the name of vocational schools.

One thing is clear, that our American system of education, which we have so vaunted, and of which we are so proud, is as yet far short of what it should be in width and range of opportunity. When one reads such a publication as this issued from the Department of Commerce and Labor, *The Special Consular Report upon Industrial Education in Germany*, and sees what that country, by no means as wealthy as our own, struggling against much that is a positive hindrance to her success industrially, in the shape of a large army, and with not a tithe of our national resources, is doing in promoting, as far as possible, the efficiency of every child, by maintaining a magnificent system of general education, when one contemplates the

vast variety of her industrial schools, the multiform ways in which they are connected with the general system of instruction, there is realization of how much there is for us to learn. Most surely the excuse of not enough money—and here I am on Professor Person's ground—is utter hypocrisy. Go into any city of this country and see how much is spent for needless luxuries! See the amount wasted through poor administration! Then calculate the enormous returns that will come through industrial training of our youth and it must be admitted that here is plenty of money to equip such schools, to erect buildings, and to provide teaching force. Only we must in fairness to the community consider how to spend this money most wisely and most effectively.

In large areas in Massachusetts we cannot hope to establish special schools for special trades in every town. They have not done this in Germany. The distribution of their trade schools is suggestive. To make a local application, when you speak of Lynn you think of the shoe industry; when you speak of Lowell, textiles; Holyoke, paper and textiles; Fall River, textiles. So there must be kept in mind the specific needs of each community. It certainly would be folly to establish the same kind of a special vocational school in a country town as in a manufacturing city. Hence the need of careful planning and adjustment. It is interesting to see that beginnings are being made in this direction, although I do not know as yet of any vocational school that meets the definition given by Professor Person. The Smith School, in Northampton, has agriculture, industrial, and domestic science courses; there is an agriculture high school at Petersham. Other instances could be given of special schools in particular districts, promising ventures in the field of vocational training.

Some things have been done in Springfield in the way of vocational training in the high schools, and statements from those who are directly in charge of the work may be of interest. In anticipation of this meeting I asked the principal of the technical high school to send me his views on certain subjects and topics regarding that school. A letter was also sent to the head of the commercial department in the technical high school. The inquiries were as follows:

“To what extent is direct vocational training given in the Springfield Technical High School?” The answer is: “If by direct vocational training you mean definite or special vocational training along some-



what narrow lines such as would be given in a trade school, I should say that *that* is not at present given in the Technical High School even in the commercial department which, however, comes perhaps the nearest to giving direct vocational training of any of our departments. In my judgment such specific, special, narrow, direct vocational training should be reserved for trade schools and not given in high schools."

The next question: "In what way does the work in the shops and mechanical drawing promote vocational skill?" "The *main* object of the work in our shops and in our mechanical drawing department is not to promote skill which may be applied vocationally, but to awaken, stimulate, and expand native mechanical ability in a broad way, to give knowledge of fundamental principles of modern methods of design and construction, to show the applications of the common branches of high-school study in the mechanical and applied arts, to do everything that can be done in four years of high-school life for a boy or girl who is to live under present-day social and economic conditions, though in what capacity he or she is to live we do not assume to know. Whatever skill or vocational training comes out of this process (and there must be some—in some cases a good deal) is incidental, however valuable it may be. With some pupils the vocational motive is a considerable factor."

Another question was: "What per cent. of boys in each class graduated during the last ten years from the Technical High School has entered upon direct mechanical work?" It might be said that the school started in 1898, and by 1903 was well under way. Of the graduates since 1903, "7 per cent. have already completed their education in technical colleges; 21 per cent. are now in such schools; 33 per cent. are employed as draftsmen, 6 per cent. as machinists, 2 per cent. as pattern-makers; 7 per cent. are directing mechanical work and have men under them; 14 per cent. are doing clerical work connected with manufacturing enterprises; 6 per cent. are teaching in technical schools; the remaining 20 per cent. found their school training of general rather than of vocational value."

Here are some of the occupations into which these pupils have gone.

"Students"—which refers to those in the technical schools—"draftsmen, machinists, pattern makers, assistant master mechanics, foremen in charge of construction work, electrical contractors, steel inspectors, electricians, civil engineers, mechanical engineers, loco-

motive firemen, teachers, chauffeurs, telegraph operators, car tracers, stenographers, bookkeepers, shipping clerks, manufacturers' clerks, time-keepers, salesmen, letter carriers, grocers' clerks. Forty-five per cent. of these graduates are employed in mechanical work."

The figures regarding pay must be of interest. The class of 1903 at the outset began with a wage of \$8.65 a week; 1904, \$8.34; 1905, \$7.50; 1906, \$9.83; 1907, \$8.90. I suppose the decline from \$9.83 to \$8.90 is due to the business depression. The lowest present wages received are \$4 per week, and the highest \$50 per week, the average being \$15.45.

The commercial department has been in operation for ten years. Two years ago it was transferred from the Central High School to the Technical High School. The first question was as to the extent to which direct vocational training is given in the commercial department. "Pupils in the commercial department are required to take 20 hours of work per week, and of this work almost exactly 25 per cent. is direct vocational training." I have an impression that it is somewhat larger, because the instruction in English is with a view to the needs of business people. "The pupils who graduate from the commercial department are fitted to be bookkeepers and stenographers. Of course, this does not mean that they are ready to do the work of experienced men and women, but that they are prepared to fill subordinate positions in these lines.

"Without question, a commercial course should prepare its graduates for vocations.

"Of the pupils who have graduated from the commercial department during the last ten years, 96 per cent. of the boys and 88 per cent. of the girls have entered upon direct vocational work."

It has been a great satisfaction to keep in touch with the commercial department, which was for a time in the school with which I am connected. The business men of the community have the utmost confidence in the judgment of the head of that department, not only in regard to the specific skill of the boy, but as to his general ability, and it is no unusual experience to receive more calls for pupils than can be met. The school, even if it is not constructed on ideal lines, is meeting the needs of the business community of Springfield. It, however, combines general work with this vocational work.

The following statements regarding employment are in answer to the question: "Have the results justified the introduction of the

commercial course in Springfield? Do the graduates find employment readily?" During the fall of 1907 a questionnaire was sent to each graduate of the commercial department, in order to obtain exact information concerning employment and earnings of the young men graduates. The total number was 76. So the answers applied to those of some standing and experience. Of these 76, the number employed in business for self 4, in business with father 2, working for others 56, a total of 62; 1 in college, 1 ill, 2 out of work, and 10 who did not reply. Out of the 76, 62 were accounted for as actually employed in some establishment. It is known, further, that of the ten who did not reply, five are in good positions, so that out of 76 at least 67 are actually at work on the lines for which the school made some preparation. Of the young women 151 graduated. You notice the larger proportion of young women. Of these, 106 in business offices, 3 teaching, 2 in school, 3 at home, 2 ill, 6 unemployed, 20 married, and 9 who did not reply. Of the nine who did not reply one is married and three have good positions, but the whereabouts of the other five are not known. The earnings show that there is decided advantage for the graduate of such a course as against one who goes into business without special training.

There is, of course, a period of preliminary experience of which Professor Person spoke, and it is in the mind of those in charge of this course that with the instruction in bookkeeping, in stenography, in the work of a salesman, and of a general clerk, there must be left a certain margin in the pupil's intelligence for the business man to fill with his specific requirements. It is unfortunate for a high-school graduate to enter a business establishment with the impression that he can teach the manufacturer or the manager how to keep books. And so the young man is taught among other things to be very humble in his attitude at the outset, and to be a learner even after he has left school.

It would be interesting, if there were time, to critically examine the above figures, but one or two quotations from statements of business men in the city will help to show their significance. A large publishing house says: "We have had experience in hiring many stenographers, especially during the past few years, and whenever we are not obliged to fill a place with a stenographer who has had several years' actual office experience we always try to get a graduate of the Springfield High School." The reference is to the commercial course. This is the statement of a mercantile house:

"Without exception all have given entire satisfaction. Their work shows thorough training, not only in the capacity of stenographers, but in the little details which do so much to make office work run smoothly. They show thorough training not only in their designated work, but also good evidence of good mental training outside of this." I hope you will understand I do not read those extracts with the intention of lauding the commercial department of the high school, but simply to show that in a general way there can be much done, even under our present imperfect system of organization, to fit young people for entering upon the actual work of life.

In my researches in this subject I came across the utterance of the German emperor in 1890 at the great conference of secondary schools, and I am sure there are texts in this utterance on which many sermons might be preached to American schoolmasters. The criticism would be not against lacks in our organization, but against defects in methods and aims.

The course of training in our schools is defective in many ways. The chief reason is that since the year 1870 the classical philologists have been lodged in the Gymnasium as *beati possidentes*, and have laid the chief emphasis on the subject-matter of instruction—on learning and knowing—not on the formation of character and on the actual needs of life. . . . The demands made in the examinations show that less stress is laid on practical ability than on knowledge. The underlying principle of this is that the scholar must, above all things, know as much as possible; whether that knowledge fits the actual needs of after life is a secondary consideration. If one talks with one of these gentlemen and tries to explain to him that the youth must in some measure be practically equipped at school for actual life and its problems, the invariable reply is that such is not the mission of the school, that its chief concern is for the training of the mind (*die Gymnastic des Geistes*), and that, if this training of the mind is rightly ordered, the young man is placed in a position by means of it to undertake all the necessary tasks of life. I think that we cannot go on acting from that point of view any longer. . . . I am well aware that in many circles I am regarded as a fanatical enemy of the older classical education, and that my views are oft quoted in support of other forms of school training. But this is a mistake. Anyone who has been at a Gymnasium, and has seen behind the scenes, knows where the defect is. The chief defect in these schools is the lack of a national basis for the instruction.

Whatever may be said of the German emperor in regard to his international policies, he certainly has the art of putting things clearly and of seeing conditions as they exist.

As the foundation of the studies of the old-style schools (corresponding very much to our classical high schools) we must take the mother-tongue. We ought to train up young Germans with a national spirit, not as Greeks or Romans. We must depart from the basis which has been the tradition of centuries, from the monastic schools of the Middle Ages, where Latin was the chief thing with a little Greek in addition. . . . Similarly, I should like to see the national ideal more inculcated in questions of history, geography, and legend. . . . Why are our young people misled? Why do so many people make their appearance with confused, unthought-out schemes for the improvement of the world? Because our young people do not know how the present state of things developed. . . . Coming to the actual occupation of our young people at school, it is absolutely necessary that we should reduce the number of hours of work. Our schools, and I speak more especially of the Gymnasium, have undertaken a task beyond human strength, and have, in my opinion, caused an over-production of highly educated people—more than the nation can bear. The expression “academic proletariat” (das Abiturientenproletariat), which we owe to Prince Bismarck, is a true one. The whole body of so-called “Hungerkandidaten” (especially those gentlemen who write for the press) are a danger to us. . . . I will therefore approve the foundation of no more such schools in the future unless their necessity can be proved. We have enough of them already.

*Mutatis mutandis* there is much in this utterance which we can apply to our existing system of schools, in providing for these young people who cannot go through the entire course of programme from elementary school through college, and in the methods of instruction in our existing high schools, to the end that our teaching may be more practical, effective, and modern.